Assuming, but not conceding, that the invention of Beranek et al. comprises a grass guide, the examiner's suggestion that said grass guide bends reveals that she has interpreted Claims 18 and 19 in a way that was not intended by the applicants.

The language of Claims 18 and 19, previously presented with the applicants' request for continued examination, filed November 13, 2006, reads as follows:

Claim 18: A rotary cutting apparatus comprising
a plurality of blades, each blade fixed to the end of a drive shaft in substantially perpendicular orientation to the shaft, each shaft projecting downward from a power means at an angle tilted longitudinally between 1 and 90 degrees from vertical,
a grass guide,
a chassis, and
a means for effecting movement of the apparatus over a cutting surface.

Claim 19: The rotary cutting apparatus of claim 18, wherein said grass guide bends and constrains grass to be cut by the blades.

The verb "bends" contained in Claim 19 may be read one of two ways. One could read "bends," as the examiner has, to apply to the grass guide; that is to say, that the grass guide itself bends, and that the bent grass guide, in addition to bending, constrains the grass to be cut by the blades. The alternative reading, and that intended by the applicants, is to read the grass guide to be the subject of the second phrase of Claim 19, and read the grass to be cut by the blades to be the object of both verbs, "bends and constrains." That is, the grass guide, while itself remaining rigid, effectuates the action of bending and constraining upon the uncut grass in its path. The uncut grass is bent and constrained, and moreover, held in a position ideal for cutting by virtue of the angle at which the blade cuts the bent and constrained grass, as well as the reduction in cutting area achieved by bending and constraining the uncut grass in a position that allows for a reduced cutting area of the blade required to cut the grass.

I have combined the limitations of Claims 18 and 19 into a single claim by cancelling Claim 19 and including its limitations as supplemental language in Claim 18. In doing so, I have amended the language of Claim 18 in a manner that indicates that the grass guide is indeed straight and rigid, and that it bends the uncut grass in its path, but does not itself bend. Claim 18 has also been amended to explicitly state that the grass guide and its mounting position also constrain said uncut grass such that it restricts movement of said uncut grass as it is cut by said plurality of blades. I have further amended Claims 18 and 20 to include more structural and functional detail in order to distinguish the features of the invention of the '192 application from those thought by the examiner to be similar to some of the features of Beranek et al. Since all of the claim rejections hinge on the similarity of those features between the '192 invention and that of Beranek et al, I have not addressed any similarity thought by the examiner to exist between the '192 invention and the references cited in the Office Action other than Beranek et al.

B. The Suggested Combinations do not Teach Every Limitation of the Invention Disclosed in Application 10/715,192

According to MPEP § 706.02(j), "[t]o establish a *prima facie* case of obviousness" for the purpose of rejecting a claim under 35 U.S.C. § 103, "the prior art reference (or references when combined) must teach or suggest all the claim limitations" of the claim being rejected. For the reasons that follow, the examiner of the '192 application has not met that burden with respect to her rejection of any of the claims of the '192 application "under 35 U.S.C. § 103(a) as being unpatentable over Beranek et al." in view of the various other cited references as set forth at paragraphs 2-5 of the Office Action mailed on December 6, 2006. Since all of the rejections made by the examiner in the Office Action rely on Beranek et al in combination with various other references, all of the rejections based on 35 U.S.C. § 103(a) are overcome if the '192 application is amended to claim features that are distinguishable from those features of Beranek et al relied upon by the examiner in the Office Action.

The examiner noted the following features, inter alia, of Beranek et al and attributed similarity to them with respect to the apparatus described in the '192 application in order to rely upon them in her rejection of claims:

- A replaceable blade (23) perpendicularly affixed to the end of a drive shaft (22) connected to a replaceable power means (16), the shaft (22) at a fixed angle (when leaning resting on runner 27) tilted longitudinally between 1 and 90 degrees from vertical, the angle being adjustable (by tilting the chassis around the wheel axles, at 8)
- A grass guide (35) that bends to constrain grass to be cut by the blade (23, by enclosing the grass inside the guide, the guide constrains the grass)

As the examiner noted, the angle of the shaft component of the invention of Beranek et al is adjustable by tilting the chassis around the wheel axles. The function of that adjustment is to allow the grass-cutting segment of the Beranek invention to pivot about the wheel axis in order to cut grass on a cutting surface that is at a different angle than the surface on which the wheels remain. This is presumably to allow the operator and the wheels to remain on a substantially horizontal surface while the cutting segment of the mower is tilted upward or downward at a different angle to cut grass near the base or apex of a hill, for example. This is accomplished necessarily by allowing the wheels to remain in a different orientation to the cutting surface than that of the cutting segment of the mower. The runners in the invention of Beranek et al function as a front support, and they are equivalent in this function to the front wheels of the '192 invention. The shaft adjustment allowed in the invention of the '192 application is made without tilting the chassis and wheels. In order to clarify that feature, I have amended Claim 20 of the '192 application to specifically indicate that the angle of the shafts can be adjusted without tilting the chassis around the wheels as required for the angle adjustment in Beranek et al.

In the Beranek invention, a single, large cutting blade remains substantially parallel to the runners, and the blade and runners remain substantially parallel to the

cutting surface in order to cut lawns evenly and cleanly regardless of uneven ground. Therefore, in order to maintain a clean and even cut, the blade, runners and land surface remain substantially parallel in the Beranek invention and the cutting area of the blade of the Beranek invention is thus greater than that of the blades used in the '192 invention. The reduction in cutting area is a significant feature of the '192 invention inasmuch as the amount of power required is reduced as compared to the blade used in the invention disclosed in the Beranek invention. This distinguishes the '192 invention further from that of Beranek et al. Claim 18 has been amended to explicitly state that the bottom-most portion of the grass guide being in a mounting position just above and behind the lower ends of the plurality of blades such that the plurality of blades will only cut grass when the blades are in the lower portions of their planes of rotation, reducing each blades cutting area and therefore reducing the power required to cut the grass.

The component identified as (35) in the Beranek drawings, which the examiner identified as "a grass guide that bends to constrain grass to be cut by the blade" is not a grass guide, nor does it constrain or restrict the motion of grass ***to be cut by the blade***. This is because the cutting blade (23) in Beranek protrudes forward in the direction of the cutting path, below and beyond component (35), which Beranek et al. identify as a "guard." Because the cutting blade protrudes forward beyond the guard, grass in the cutting path is cut by the blade without ever coming into contact with the guard. Since the guard does not contact the grass, it cannot bend grass to be cut and constrain it as it is cut, as does the grass guide disclosed in the '192 application. Since the grass is cut by the blade before it can contact the guard, there is no "grass to be cut" that could be otherwise bent or constrained by the guard, which therefore cannot possibly act as a grass guide. The only grass that might become enclosed inside the guard of Beranek et al. is grass that is already cut and has simply accumulated on the inside of the guard. Moreover, the guard of the Beranek invention surrounds the blade in circular fashion, while the grass guide of the '192 invention is straight and rigid, a feature that I have set forth in currently amended Claim 18. We believe the examiner has read "constrain" or "constrained" in the '192 application to mean "confine" or "confined," respectively. We agree that some of the grass may become confined within the guard of the Beranek invention. In the amended application submitted herewith, we have provided sufficient language in the description and claims to communicate to the examiner that by "constrain" we mean "restrict motion," and the restriction of the motion of uncut grass ***as it is cut*** is one of the key features of the '192 invention relative to conventional mowers, as well as that of Beranek et al. Restriction of the motion of uncut grass held in place by the grass guide reduces the power and energy required to cut the grass by reducing the cutting area of the blade, as described in the specification and drawings. Even if the guard of Beranek et al temporarily restricts the motion of any grass in the vicinity of the mower, it does not do so as the grass is being cut.

The grass guide (6) of the invention disclosed in the '192 application is situated forward of the blades of the rotary cutting apparatus of Claim 18, a feature which enables it to bend the grass to be cut, restrict the motion of the grass to be cut, and reduce the blade's cutting area. The combination of reducing the blade's cutting area and constraining the movement of the uncut grass with the grass guide results in a more

efficient cutting design which requires less power to cut the uncut grass. That is why component (6) is called a "grass guide;" i.e., it guides the grass into a position such that it is cut by the cutting blades with reduced expenditure of power. In order to provide the necessary structural and functional detail to the claims of the '192 application to distinguish these features from those of Beranek et al, I have amended Claim 18 to specifically set forth the position and orientation of the grass guide with respect to both the cutting blades and the grass to be cut when the mower is functioning. The amended language provides sufficient detail to distinguish the features of the '192 invention thought by the examiner to be disclosed by Beranek et al.

Because Beranek fails to disclose a grass guide in any enabled embodiment of his invention, and the examiner relied on Beranek in view of other references in all of her grounds for rejection of the '192 application claims, the examiner has not met the burden of showing that every feature of the invention claimed in the '192 application is present in the combinations relied upon in her rejection of the claims under 35 U.S.C. § 103(a). Therefore, the claims are not obvious under 35 U.S.C. § 103(a) in light of Beranek in view of the other cited references according to the standard set forth in MPEP § 706.02(j).

If you have any questions regarding the above remarks or any part of the amended application submitted herewith, please do not hesitate to contact me at 410-409-4289, or via email at wordlloyd@comcast.net.

Sincerely,

2/5/07

Steven S. Lloyd
Registered Patent Agent No. 56,650

Date